

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,966	11/06/2001	Curtis A. Vock	397057	8991

7590

07/18/2003

Curtis A. Vock, Esq.  
Lathrop & Gage L.C.  
4845 Pearl East Circle  
Suite 300  
Boulder, CO 80301

EXAMINER

WACHSMAN, HAL D

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**UNITED STATES DEPARTMENT OF COMMERCE****U.S. Patent and Trademark Office**

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
---------------------------------	-------------	---	---------------------

EXAMINER
----------

ART UNIT	PAPER
----------	-------

16

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Hal D Wachsman  
Primary Examiner  
Art Unit: 2857

# Office Action Summary

Application No.

09/992,966

Applicant(s)

VOCK ET AL.

Examiner

Hal D Wachsman

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6, 7, 10-13 and 15-25 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 8, 9 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 30 October 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

Art Unit: 2857

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-3-03 has been entered.

2. In view of the papers filed 10-30-02 and 6-3-03, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by deleting inventors Perry Youngs, Adrian F. Larkin, Steven Finberg, Shawn Burke and Kevin Grealish from the inventorship.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of the file jacket and PTO PALM data to reflect the inventorship as corrected.

3. The statement of continuing data does not provide the current status of U.S. application serial number 09/089,232 and as it is worded does not make clear that 09/089,232 is also a continuation-in-part of U.S. application serial number 08/764,758. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

Art Unit: 2857

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Landsman (4,822,042).

As per claim 15, Landsman (Abstract, col. 3 lines 47-55) discloses the integrating step. Landsman (Abstract, figure 3A) discloses the processing step. Landsman (Abstract, col. 3 lines 63-68) discloses the wirelessly transmitting step.

As per claim 19, Landsman (Abstract, col. 3 lines 47-55) discloses the feature of this claim.

As per claim 20, Landsman (see at least abstract) discloses the feature of this claim.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landsman (4,822,042) in view of Chateau et al. (4,699,379).

As per claim 16, Chateau et al. (Abstract, col. 1 lines 16-19, col. 2 lines 45-48) teach a sensing unit reporting the athletic performance to a watch worn by an individual. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Chateau et al. to the invention of Landsman as specified above because as taught by Chateau et al. (col. 1 lines 13-16, 20-24) many biofeedback devices which monitor a particular human activity have been proposed to improve various sports activities such as the golf swing of a golfer, the bowling ball delivery of a bowler or the swing of a baseball hitter. The tennis player in Landsman in similar fashion swings a tennis racquet just as the baseball player swings a bat or a golfer swings a golf club.

8. Claims 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landsman (4,822,042) in view of Matcovich et al. (5,056,783).

Art Unit: 2857

As per claim 17, Matcovich et al. (Abstract, figure 10 – block 12) teach the sensor comprising an accelerometer. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Matcovich et al. to the invention of Landsman as specified above because as taught by Landsman (col. 1 lines 20-23) the techniques of Landsman determine the quality of the swing impulse and impact force of swinging baseball bat, golf club, tennis racquet and the like.

As per claim 21, Matcovich et al. (Abstract, col. 2 lines 17-24) teach determining performance data in which the performance data is speed (velocity is the first derivative of speed). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Matcovich et al. to the invention of Landsman as specified above because as taught by Landsman (col. 1 lines 20-23) the techniques of Landsman determine the quality of the swing impulse and impact force of swinging baseball bat, golf club, tennis racquet and the like.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landsman (4,822,042) in view of Matcovich et al. (5,056,783) as applied to claim 17 above, and further in view of Zakutin (5,761,096).

As per claim 18, Zakutin (Abstract, col. 4 lines 10-19) teaches integrating the sensing unit within a baseball which is a type of playing ball just as soccer balls, basketballs and volleyballs are a type of playing ball. In addition, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Zakutin to the inventions of Landsman and Matcovich et al. as



Art Unit: 2857

specified above because in both the tennis of Landsman and the baseball of Matcovich a playing ball is being utilized in these sports and as taught by Zakutin (col. 1 lines 10, 11) in many sports, it is desired to determine how fast a projectile is thrown or shot.

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Landsman (4,822,042) in view of Cobb et al. (4,759,219).

As per claim 22, Cobb et al. (Abstract, col. 1 line 68, col. 2 lines 1-9) teach the integration of a sensing unit in a sports implement and the "ski, snowboard, mountain bike...ice skate..." cited in the claim are all examples of sports implements. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Cobb et al. to the invention of Landsman as specified above because as taught by Cobb et al. (col. 2 lines 7-9) it would minimize the size and cost of the device and in providing a unit small enough to be embedded withing the physical confines of the sports implement.

11. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busack (6,020,851) in view of Eriksson (4,089,057).

As per claim 1, Busack (Abstract, col. 4 lines 29-34) discloses the coupling step. Busack (see at least abstract) discloses the downloading data step. Busack et al. (Abstract, col. 1 lines 5-10) discloses the processing the data step with the exception of clearly disclosing that the performance being compared is athletic performance. However, Eriksson (Abstract, col. 1 lines 8, 9, 13-15) teaches this excepted feature. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Eriksson to the invention of Busack as specified

above because both references deal with monitoring racing competitions, the auto race in Busack and the slalom racing events in Eriksson.

As per claim 2, Busack (Abstract, col. 3 lines 24-32) discloses the feature of this claim.

12. Claims 3 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busack (6,020,851) in view of Eriksson (4,089,057) as applied to claim 1 above, and further in view of Purdy et al. (4,757,714).

As per claim 3, Purdy et al. (Abstract, col. 1 lines 45-59) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Purdy et al. to the inventions of Busack and Eriksson as specified above because Purdy et al. measures the speed of a skier and Eriksson monitors the speed of skiers in a ski competition.

As per claim 10, Eriksson (see at least abstract) teaches comparing the forward velocity of each of the persons and Purdy et al. (Abstract, col. 1 lines 45-59) teach the attaching of speed sensor to each person. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Purdy et al. to the inventions of Busack and Eriksson as specified above because Purdy et al. measures the speed of a skier and Eriksson monitors the speed of skiers in a ski competition.

As per claim 11, Purdy et al. (Abstract, col. 2 lines 46-55) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Purdy et al. to the inventions

Art Unit: 2857

of Busack and Eriksson as specified above because Purdy et al. measures the speed of a skier and Eriksson monitors the speed of skiers in a ski competition.

As per claims 12 and 13, Purdy et al. (see at least abstract) teach the features of each of these claims. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Purdy et al. to the inventions of Busack and Eriksson as specified above because then the sensor would be able to move with the person as well as not encumber the person in the sports competition.

13. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busack (6,020,851) in view of Eriksson (4,089,057) as applied to claim 1 above, and further in view of Nikolic et al. (6,436,052).

As per claim 6, Nikolic et al. (Abstract, figure 1, col. 4 lines 5-17, 50-55) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Nikolic et al. to the inventions of Busack and Eriksson as specified above because as taught by Nikolic et al. (col. 4 lines 36-44) the techniques of Nikolic et al. can be applied not only for determining the work of a professional athlete but also to every day men, women and children undergoing their own recreation and daily routines, whether they are sporting events, exercise routines, work routines and so forth.

As per claim 7, Nikolic et al. (Abstract, figure 1, col. 4 lines 5-17, 50-55, col. 5 lines 25-28, col. 10 lines 21-34) teach the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to

Art Unit: 2857

apply the techniques of Nikolic et al. to the inventions of Busack and Eriksson as specified above because as taught by Nikolic et al. (col. 4 lines 36-44) the techniques of Nikolic et al. can be applied not only for determining the work of a professional athlete but also to every day men, women and children undergoing their own recreation and daily routines, whether they are sporting events, exercise routines, work routines and so forth.

14. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Busack (6,020,851) in view Eriksson (4,089,057) as applied to claim 1 above, and further in view of Fry (6,002,982).

As per claim 23, Fry (Abstract, figure 4, col. 1 lines 8-11, 50-54, col. 2 lines 19-26, 51-60, col. 7 lines 19, 20) teaches the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Fry to the inventions of Busack and Eriksson as specified above because as Fry teaches a sports computer with performance tracking capabilities it would be of use in the auto racing sport of Busack as well as in the skiing sport of Eriksson which deal with sports competitions in which performance is being tracked.

As per claim 24, Fry (Abstract, col. 2 lines 51-58) teaches the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Fry to the inventions of Busack and Eriksson as specified above because as taught by Fry (col. 1 lines 11, 12) it would facilitate the tracking and mapping of route and athlete performance parameters.

Art Unit: 2857

As per claim 25, Fry (col. 2 lines 51-58, col. 3 lines 8-10) teaches the feature of this claim. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply the techniques of Fry to the inventions of Busack and Eriksson as specified above because the appendage pressure sensor (col. 3 lines 8-10) would enable the monitoring of the heart rate of the sports participant.

15. Claims 4, 5, 8, 9 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 if rewritten as described above would be allowable over the prior art because the prior art does not disclose or suggest attaching a mobile airtime sensor to each person whose athletic performance is being reviewed via the Internet, in which the processing of the data to compare athletic performances comprises comparing airtimes between each of the persons.

Claim 5 if rewritten as described above would be allowable over the prior art because the prior art does not disclose or suggest attaching a mobile drop distance sensor to each person whose athletic performance is being reviewed via the Internet, in which the processing of the data to compare athletic performances comprises comparing drop distances between each of the persons.

Claims 8 and 9 if rewritten as described above would be allowable over the prior art because the prior art does not disclose or suggest a mobile power sensor attached to each person whose athletic performance is being reviewed via the Internet that

Art Unit: 2857

determines an aggressiveness corresponding to motion of each of the persons during athletic activity.

Claim 14 if rewritten as described above would be allowable over the prior art because the prior art does not disclose or suggest processing data to compare athletic performances of multiple persons with Internet users reviewing the comparisons, by determining a power spectral density of the data.

16. The following references are cited as being art of additional general interest:

Smith, III et al. which disclose an accelerometer with microprocessor integrated within a football, Marsh et al. which disclose a sensing unit and processor integrated within a golf club, Bianco et al. which disclose a GPS- based golf distancing system and Dugan et al. which disclose an accelerometer and output means integrated within a swing tempo training device.

17. Applicant's arguments filed 6-3-03 have been fully considered but they are not persuasive with respect to the claims rejected above. First, as a result of further search and review as well as the filing of newly added claims 23-25 and amended claim 11, several new grounds of rejection have been made above. With respect to the arguments concerning the Landsman reference col. 3 lines 53-55 of Landsman states "It should also be appreciated that the leads connecting the sensors to the electronic circuit may be embedded into frame 4....". These leads therefore are a part of the sensing unit and in this instance embedded into the frame which means they are co-located with sensors 12a-d because these sensors are located around the periphery of the frame (see Abstract figure and col. 3 lines 40-42) and thus the sensing unit is co-

located with the sensors. With respect to the arguments concerning Ericksson on page 8 of the reply, this reference as shown in both this Office Action as well as the previous Final Office action was only used to show the athletic performance aspect and not the mobile sensors, Internet-accessible database, etc. that is being argued here. With respect to Busack on page 9 of the reply the Applicant states "In any event, Busack does not teach attaching a mobile sensor to a plurality of persons..." however the feature in claim 1 cites "coupling a mobile sensor with each of the persons". With respect to the arguments concerning the motivation for combining Busack and Ericksson, this motivation was found in the references themselves and stated in the 35 U.S.C. 103 rejections. The Applicant argues on page 9 of the reply that "Ericksson also teaches only a single skier, and does not teach comparing athletic performances among a plurality of persons..." however the Abstract of Eriksson clearly shows a results table for a plurality of skiers and col. 1 lines 13-16 of Eriksson clearly refers to slalom racing events and ski-jumping events which constitute competitions between a plurality of skiers. With respect to the arguments on page 10 of the reply concerning the structural combination of Busack and Ericksson the Examiner respectfully notes the following:

In response to applicant's argument that the structure and function of Busack and Ericksson is relevant to whether one of ordinary skill would combine the references, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the

Art Unit: 2857


test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

With respect to the arguments concerning Purdy et al. on pages 10-11, this reference was only used to teach several features in some of the dependent claims and not the features of independent claim 1.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D Wachsman whose telephone number is 703-305-9788. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 703-308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Hal D Wachsman  
Primary Examiner  
Art Unit 2857

HW  
July 13, 2003